

## ABSTRACT

5 A breathing assistance apparatus adapted to deliver humidified gases at a desired level of humidity to a patient including a humidifier and a heated conduit is disclosed. The humidifier includes a controller which determines the flow rate of the gases and then determines the required power input to the humidifier to deliver the gases to the patient at the required patient humidity. This means the need for external sensors is dispensed with and thus the apparatus is simple and less bulky. The resistance of the conduit heater element is monitored to give a coarse indication of flow rate.

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